

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition
1	BRS	L1	1	4415153.pn.	USPAT	2000/01/07 08:11		
2	BRS	L2	56	463/23.ccls.	USPAT	2000/01/07 08:24		
3	BRS	L3	208	463/25.ccls.	USPAT	2000/01/07 08:27		
4	BRS	L4	87	463/43.ccls.	USPAT	2000/01/07 08:29		
5	BRS	L5	136	463/36.ccls.	USPAT	2000/01/07 08:41		
6	BRS	L6	148	463/37.ccls.	USPAT	2000/01/07 09:15		
7	BRS	L7	45	463/30.ccls.	USPAT	2000/01/07 09:17		
8	BRS	L8	202	463/31.ccls.	USPAT	2000/01/07 09:23		
9	BRS	L9	136	463/36.ccls.	USPAT	2000/01/07 09:28		
10	BRS	L10	88	463/38.ccls.	USPAT	2000/01/07 09:30		
11	BRS	L11	15	463/8.ccls.	USPAT	2000/01/07 09:33		
12	BRS	L12	59	463/7.ccls.	USPAT	2000/01/07 09:36		
13	BRS	L13	115	vibration adj switch	USPAT	2000/01/07 09:42		
14	BRS	L14	22643	345/\$.ccls.	USPAT	2000/01/07 09:44		
15	BRS	L15	0	13 and 14	USPAT	2000/01/07 09:44		
16	BRS	L16	71	345/177.ccls.	USPAT	2000/01/07 09:51		
17	BRS	L17	24119	input adj device	USPAT	2000/01/07 10:34		
18	BRS	L18	112	178/18.04.ccls.	USPAT	2000/01/07 10:35		

	U	1	Document ID	Issue Date	Pages	Title	Current OR
1	<input type="checkbox"/>	<input type="checkbox"/>	US 4415153 A	19831115	28	Figure displaying game apparatus	463/23

	U	1	Document ID	Issue Date	Pages	Title	Current OR
1	<input type="checkbox"/>	<input type="checkbox"/>	US 5947819 A	19990907	28	Object-throwing video game system	463/2
2	<input type="checkbox"/>	<input type="checkbox"/>	US 5207793 A	19930504	10	Hammering game	273/445
3	<input type="checkbox"/>	<input type="checkbox"/>	US 4673367 A	19870616	11	Animated figure toy	446/4
4	<input type="checkbox"/>	<input type="checkbox"/>	US 4319751 A	19820316	9	Hammer game	273/440.1
5	<input type="checkbox"/>	<input type="checkbox"/>	US 3708168 A	19730102	3	GAME APPARATUS	273/447

[illegible]

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition
1	IS&R	L1	62	("273/378").CCLS.	USPAT	2000/01/06 14:09		
2	IS&R	L2	81	("273/386").CCLS.	USPAT	2000/01/06 14:22		
3	BRS	L4	0	WHACKING ADJ GAME	USPAT	2000/01/06 14:12		
4	BRS	L6	134	273/446	USPAT	2000/01/06 14:17		
5	BRS	L7	94	273/446.CCLS.	USPAT	2000/01/06 14:19		
6	BRS	L8	1	WHACKING ADJ3 PLAYER	USPAT	2000/01/06 14:20		
7	IS&R	L9	78	("273/387").CCLS.	USPAT	2000/01/06 15:10		
8	BRS	L10	136	463/36.CCLS.	USPAT	2000/01/06 15:19		
9	BRS	L11	148	463/37.CCLS.	USPAT	2000/01/06 15:25		
10	BRS	L12	98	463/46.CCLS.	USPAT	2000/01/06 15:28		
11	BRS	L13	5	HAMMER ADJ2 GAME	USPAT	2000/01/06 15:50		
12	BRS	L14	396	463/30	USPAT	2000/01/06 15:45		
13	BRS	L15	361	463/31	USPAT	2000/01/06 15:47		
14	BRS	L16	23821	473/\$.CCLS.	USPAT	2000/01/06 15:47		
15	BRS	L17	13	WHACKING	USPAT	2000/01/06 15:48		
16	BRS	L18	455779	HOUSING	USPAT	2000/01/06 15:50		
17	BRS	L19	1250	16 AND 18	USPAT	2000/01/06 16:05		
18	BRS	L20	1	5931465	USPAT	2000/01/06 16:05		

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition
1	IS&R	L1	62	("273/378").CCLS.	USPAT	2000/01/06 14:09		
2	IS&R	L2	81	("273/386").CCLS.	USPAT	2000/01/06 14:22		
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9	BRS	L11	148	463/37.CCLS.	USPAT	2000/01/06 15:25		
10	BRS	L12	98	463/46.CCLS.	USPAT	2000/01/06 15:28		
11	BRS	L13	5	HAMMER ADJ2 GAME	USPAT	2000/01/06 15:35		
12	BRS	L14	396	463/30	USPAT	2000/01/06 15:45		
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14	BRS	L16	23821	473/\$.CCLS.	USPAT	2000/01/06 15:47		
15	BRS	L17	13	WHACKING	USPAT	2000/01/06 15:48		

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1	<input type="checkbox"/>	<input type="checkbox"/>	US 5947819 A	19990907	28	Object-throwing video game system	463/2
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4	<input type="checkbox"/>	<input type="checkbox"/>	US 4319751 A	19820316	9	Hammer game	273/440.1
5	<input type="checkbox"/>	<input type="checkbox"/>	US 3708168 A	19730102	3	GAME APPARATUS	273/447

[illegible]

United States Patent

Kousaki

[19]



US005993318A

5,993,318

Patent Number:

Nov. 30, 1999

Date of Patent:

[54] GAME DEVICE, IMAGE SOUND PROCESSING DEVICE AND RECORDING MEDIUM

[75] Inventor: Tatsuya Kousaki, Tokyo, Japan

[73] Assignee: Kabushiki Kaisha Sega Enterprises, Tokyo, Japan

[21] Appl. No.: 08/964,378

[22] Filed: Nov. 6, 1997

[30] Foreign Application Priority Data

Nov. 7, 1996 [JP] Japan 8-295539

[51] Int. Cl.⁶ A63F 9/22

[52] U.S. Cl. 463/35, 463/35; 434/69

[58] Field of Search 463/35, 30-34, 463/36, 40-44, 17; 381/17

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Portion of "Sega Saturn Magazine", vol. 17, published Sep. 30, 1997.

Primary Examiner—Valencia Martin-Wallace
Assistant Examiner—Sheila Clayton
Attorney, Agent, or Firm—Finnegan, Henderson, Farabow, Garrett & Dunner, LLP.

ABSTRACT

Sound processing technology is provided whereby sound can be changed to correspond to changes in the viewpoint for generating a virtual image. The sound processing device generates sound corresponding to a virtual image obtained by observing a virtual space from any one of a plurality of viewpoints set inside this space. It comprises sound generation conditions determining means for identifying the viewpoint of the virtual image currently being generated and determining sound generation conditions for the sound corresponding to the identified viewpoint, and sound generating means for generating sound based on sound signals in accordance with the determined sound generation conditions determined by the sound generation conditions determining means. A very realistic environment is provided to a player viewing the image.

17 Claims, 8 Drawing Sheets

